

ALCOSCAN™

PASSIVE BREATH ALCOHOL TESTER



Technical manual

Federal Communications Commission (FCC) Disclaimer

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC rules. Operations are subject to the following 2 conditions:

1. This device may not cause harmful interference
2. This device must accept any interference received, including interference that may cause undesired operations

Industry Canada

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Industrie Canada

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. L'appareil ne doit pas produire de brouillage, et
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.



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ALCOSCAN BREATH ALCOHOL TESTER

FEATURES

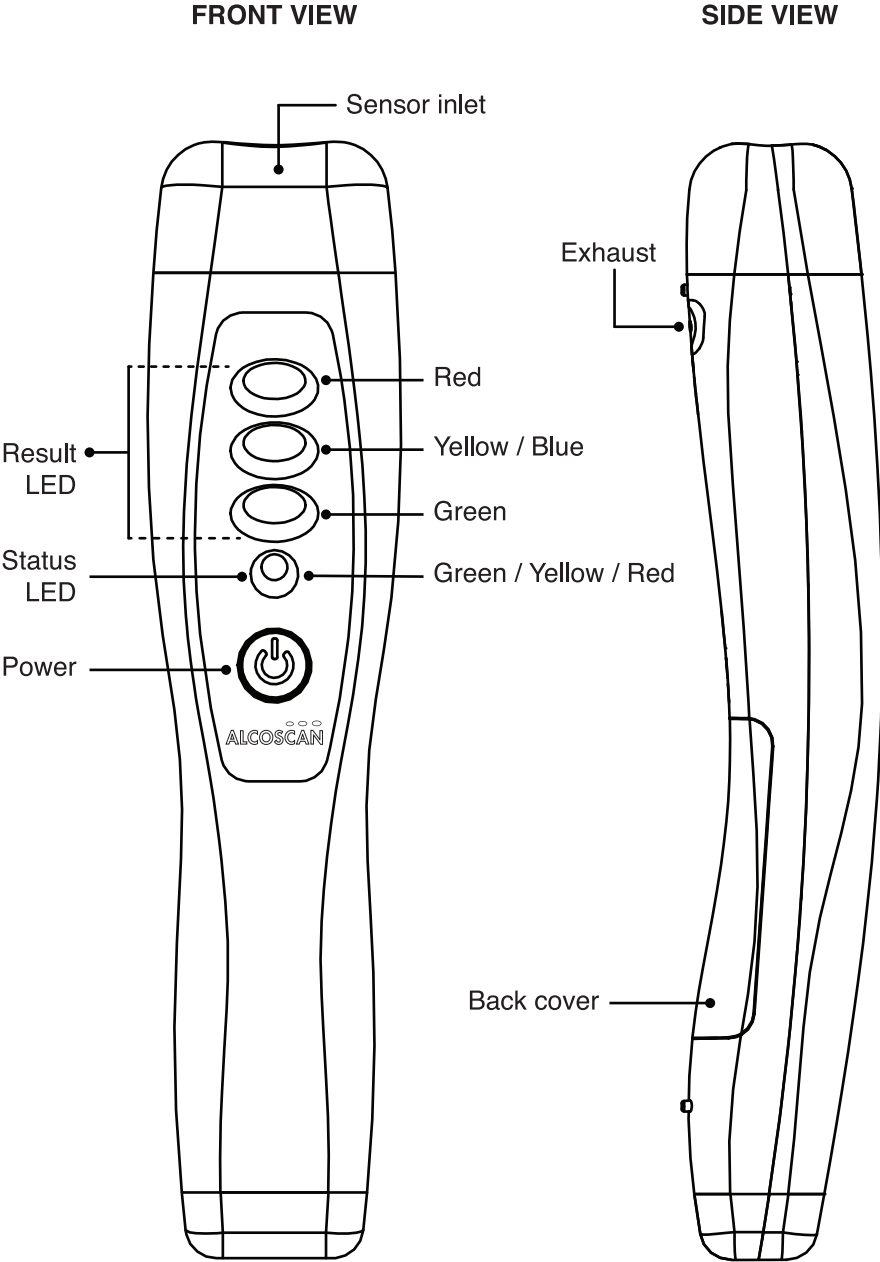


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OVERVIEW

The ALCOSCAN passive breath alcohol tester does not require a mouthpiece or active user participation. It is able to sniff the air for the presence of alcohol in an ambient environment, such as the interior of an automobile or over a beverage containing alcohol. This tester is perfect for use in bars, schools and industrial-safety applications.

The one-button operation ensures ease of use, whether you operate in the dark, with thick gloves or with one hand.

This tester can be used in ambient temperatures between 5 and 50 °C.

TESTER SPECS	
Size:	220 mm x 47 mm x 35 mm
Weight:	223 grams
Sensor:	Electrochemical (fuel cell)
Specificity:	Alcohol only, no response to ketones or hydrocarbon
Ambient temperature:	5 to 50 °C
Purge cycle (initial test):	< 30 seconds
Breath sample:	Passive
Analysis time:	< 10 seconds
Recycle (recovery) time:	15 to 45 seconds
Range of measurement:	0 to 450 mg/dL (0.00 to 0.45 g/dL)
Display:	LED interface
Battery:	4 x AA batteries (rechargeable option)
Number of tests:	10,000 (new batteries)
Memory:	Up to 1,000 events*
USB connection:	Micro USB port*
Calibration:	ALCOSIM™ or equivalent

**Only available with the ALCOSCAN M version*

STANDARD OPERATION

ACTION	FEATURE
Press the power button 1 time.	The unit turns ON and performs a self-check: <ul style="list-style-type: none">• LEDs check (all LEDs are ON)• Pump check (the pump is activated)• Battery check (the voltage is checked)• log full (# of events logged)
Press the power button 1 time (after the self-check cycle).	To take a passive test.
Press the power button 2 times.	To turn the unit OFF.

ADMIN OPERATION

ADMIN MODE SUMMARY

ACTION	FEATURE
From a Ready state	
<ol style="list-style-type: none">1. Press the power button 4 times and then hold (click, click, click, click and hold).2. Release the power button after 1 beep is heard.3. Add up the numbers indicated by the illuminated LEDs. Take that sum and press the power button that many times in quick succession.	Enters ADMIN Mode.
From ADMIN Mode	
Press and hold the power button. Release after 2 beeps are heard.	To view the Country Code.
Press and hold the power button. Release after 3 beeps are heard.	To change the Country Code.
Press and hold the power button. Release after 4 beeps are heard.	If you want to use rechargeable batteries.

ENTERING ADMIN MODE

The ALCOSCAN tester must be in ADMIN Mode to access ADMIN features. Follow these steps to enter ADMIN Mode:

1. Press the power button 4 times in quick succession and hold (click, click, click, click and hold).

A combination of LED lights will illuminate. Each light indicates a number, as shown in the diagram below.

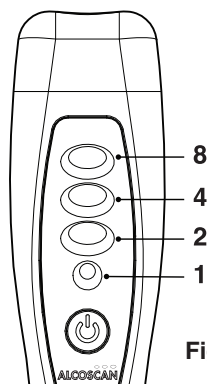


Fig 1. Numbers represented by LEDs

2. Add up the numbers indicated by the illuminated LEDs. Take that sum and press the power button that many times in quick succession.

The WARN LED light will blink blue when the appropriate number is entered. The ALCOSCAN tester is now in ADMIN Mode.

Three beeps indicate the number entered is not correct.

CALIBRATION

Refer to the “Calibration” section of the Calibration Manual (CAM-ENG-60-000712-A) for the calibration steps.

VIEW COUNTRY CODE

1. Once in ADMIN Mode, press and hold the power button. Release after 2 beeps are heard.

The Country Code is numerically represented by LEDs (see Fig. 1 in the “Entering ADMIN Mode” section of this manual for LED numbers). Each number corresponds to a specific set of Warn and Fail levels. Contact ACS for the list of countries and their settings.

2. To exit ADMIN Mode without saving, press the power button 3 times.

To turn the tester off, press the power button 2 times.

CHANGE COUNTRY CODE

1. Once in ADMIN Mode, press and hold the power button. Release after 3 beeps are heard.

The Country Code is represented by LEDs (see Fig.1 in the “Entering ADMIN Mode” section of this manual for LED numbers). Each number corresponds to a specific set of Warn and Fail levels. Contact ACS for the list of countries and their settings.

2. Each press of the button changes the Country Code by 1 unit.
3. Press and hold the power button to save the selected Country Code. Release after 1 beep is heard.
4. To exit ADMIN Mode without saving, press the power button 3 times.

To turn the tester off, press the power button 2 times.

CHANGE BATTERY TYPE

1. Once in ADMIN Mode, press and hold the power button. Release after 4 beeps are heard. The current selection is displayed:
 - a. Regular AA alkaline batteries – the red Result LED is illuminated.
 - b. Rechargeable 2400mAh NiMG batteries – the green Status LED is illuminated.
2. Press the power button 1 time to change the battery type.
3. Press and hold the power button to save the selected battery type. Release after 1 beep is heard.
4. To exit ADMIN Mode without saving, press the power button 3 times.

To turn the tester off, press the power button 2 times.

ERROR CODES AND TROUBLESHOOTING

BLINKING LED	WARNINGS		ERRORS					
	CALIBRATION	BATTERY	BATTERY	PUMP	TEMPERATURE	SENSOR	CALIBRATION	LOG
Result LED	BLUE	RED	RED	YELLOW	GREEN	BLUE	RED BLUE	RED YELLOW GREEN
Status LED	YELLOW		RED					

The following table lists troubleshooting steps to amend the above problems:

PROBLEM	REASON	WHAT TO DO
Calibration Warning	The unit is due for calibration in 10 days or 100 tests, whichever comes first. This indication is shown every time the tester is turned on.	Perform a calibration. Refer to the “Calibration” section of this manual for more information.
Calibration Expired	The unit has passed the calibration date. The WARN result LED will continue to blink blue after setup until a calibration is completed.	Perform a calibration. Refer to the “Calibration” section of this manual for more information.
Battery Warning	The battery voltage is measured to be below 4.6V for alkaline batteries or below 4.5V for NimH rechargeable batteries.	Replace the batteries soon.
Battery Error	The battery voltage is measured to be below 4.2V for alkaline batteries and for NimH rechargeable batteries.	Replace the batteries immediately to avoid loss of date/time/test records..
Pump Error	The pump is not working properly and needs to be replaced.	Send the unit to ACS for repair.
Temperature Error	The environment’s temperature is outside the operating temperature range (5 to 50 °C) or the thermistor on the board may need to be replaced.	Ensure you are in a suitable environment and try the test again. If problems continue, contact ACS.
Sensor Error	The sensor is not working properly and needs to be replaced.	Send the unit to ACS for repair.
Calibration	The calibration test result is not within the expected range.	Review the calibration steps and try again.
Log	The log is approaching the maximum number of records allowed and will start rewriting old records.	Download and clear the log with the provided SW application..



